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APPLICATION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/807,331 03/24/2004		Ping Sheng	016660-213	4022		
21839	7590 10/19	2005	EXAM	EXAMINER		
	AN INGERSOLL	BONCK, R	BONCK, RODNEY H			
•	NG BURNS, DOAN CE BOX 1404	, SWECKER & MATHIS)	ART UNIT	PAPER NUMBER		
	RIA. VA 22313-14		3681			

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No. Application No. Applicant(s)									
## Examiner Roding H. Bonck 3881 ## Ported for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. ## PORTION TO THE MAILING DATE OF THIS COMMUNICATION SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. ## PORTION TO THE WAILING DATE OF THIS COMMUNICATION SHORTER STATES SHOR				Application	No.	Applicant(s)			
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The MALING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensive or time may be a valietie under the provisions of 3 CFR 1.13(s), in covent. however, may nerely be timely field If NO period for reply is appelled above, the maintimus flatitudery period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. Failur to reply which the sor to ended period for reply is appelled above, the maintimus distultory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. Failur to reply which the sor to ended period for reply is appelled above, the maintimus disturbers. Failur to reply which the sor to ended period for reply is application to some ABNORDED (5) U.S. C. § 133). Any reply received by the Office latter than entire where the mailing date of the communication, even if timely fixed, may reduce any seater planet than endiplanets. **Status** 1) □ Responsive to communication(s) filled on 29 September 2005. 2a) □ This action is FINAL. 2b) □ This action is non-final. 3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Expande Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) □ Claim(s) 1-14 is/are pending in the application. 4a) Of the above claim(s) 9-14 is/are withdrawn from consideration. 5) □ Claim(s) 1-6 and 8 is/are rejected. 7) □ The drawing(s) filed on 24 March 2004 is/are: a) □ accepted or b) □ objected to by the Examiner. 10) □ The drawing(s) filed on 24 March 2004 is/are: a) □ accepted or b) □ objected to by the Examiner. 2b)		Office Action Summary		Examiner		Art Unit			
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U.S. Patent and Trademark Off PTOL-326 (Rev. 7-05)

DETAILED ACTION

The following is a first action on the merits of application Serial No.10/807,331, filed March 24, 2004, and is in response to applicant's election filed September 29, 2005.

Election/Restrictions

Claims 9-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on September 29, 2005.

Specification

The disclosure is objected to because of the following informalities:

In line 10 of page 2 of the specification, it appears that "and" should be – any --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

⁽b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by

Klass et al. ('200). The Klass et al. device is an electrorheological device comprising an
electrorheological fluid 60 and an electrode configuration (10, 14, 18, 22 and 12, 16, 20,
24) arranged such that an electric field is generated having a significant component
parallel to the direction of an anticipated external stress field. The electrode
configuration comprises a plurality of positive and negative electrodes (10, 14, 18, 22
and 12, 16, 20, 24) disposed on an insulating substrate 26. The electrodes are
disposed on the substrate so as to provide a series of equidistantly spaced, alternately
positive and negative electrodes in the direction of the external stress field.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson('593) in view of Klass et al.('200). The Carlson device is an electrorheological clutch having a cylindrical drive member 14 having electrode strips 38 disposed thereon. The strips in Carlson, however, are not alternating polarity as claimed and thus would not generate a significant component perpendicular to the axis of rotation and parallel to the surface of the members. The Klass et al. device is an electrorheological device comprising an electrorheological fluid 60 and an electrode

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configuration (10, 14, 18, 22 and 12, 16, 20, 24) arranged such that an electric field is generated having a significant component parallel to the direction of an anticipated external stress field. The electrode configuration comprises a plurality of positive and negative electrodes (10, 14, 18, 22 and 12, 16, 20, 24) disposed on an insulating substrate 26. The electrodes are disposed on the substrate so as to provide a series of equidistantly spaced, alternately positive and negative electrodes in the direction of the external stress field. The Klass et al. device shows a planar electrorheological device for coupling to block 62, but discloses that the device could be cylindrical for coupling to a cylindrical object. It would have been obvious from Klass et al. to modify Carlson to have alternating positive and negative electrode strips, the motivation being to provide the improved coupling taught by Klass et al.

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson('593) in view of Klass et al. ('200) as applied to claims 3-5 above, and further in view of Kasahara('461). It is unclear from Klass et al. whether the electrodes extend from opposite ends and are of equal length. Kasahara shows an electrode arrangement in Fig. 4 wherein positive and negative electrodes extend from opposite directions on cylindrical member 26. In incorporating the Klass et al. electrode configuration in Carlson, it would have been obvious, in further view of Kasahara, to extend the electrodes from opposite directions and provide the electrodes of equal length, the motivation being to achieve uniform field strength throughout the length of the cylindrical member.

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Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nuber('678) is cited to show a device using an electrorheological fluid as a chuck or a brake.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (571) 272-7089. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Rodney H. Bonck Primary Examiner

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rhb

October 14, 2005